Welcome note from the Project Leader

Abbas Rajabifard

Welcome to the September update. This month was a busy one for CSDILA with our 3D Land & Property research team participating in the 2013 SSSI Victorian Spatial Summit. We ran a workshop ‘Positioning for the future from ePlan to 3D Cadastre, including ePlan case studies, BIM, Laser Scanning and 3D Cadastres’ on Thursday 12 September, which was chaired by Brian Marwick and presented by Mohsen Kalantari alongside Chris Lester (Land Victoria) and Malcolm McCoy (AAM). Our team presented our 3D Land & Property project and engaged the participants with the future applications of 3D Cadastre. I am proud to say that the feedback received during the workshop was highly positive and that the workshop was a great success.

Also, in conjunction with the ARC Linkage Project on 3D Land and Property Information, we are evaluating the currently emerging technologies for 3D display. We shall continue to keep you updated and informed on the progress of Land and Property Information in 3D conducted at the University of Melbourne. Once again, thank you for all your support and contribution.

2013 Victorian Spatial Summit round-up

3D CSDILA Team

The 3D cadastre team hosted a mini-workshop at the recent Victorian SSSI Summit. The session, titled ‘Positioning for the future from ePlan to 3D Cadastre’, was a collaborative workshop between the University of Melbourne, the Department of...
Transport, Planning and Local Infrastructure (DTPLI), Geometri and AAM, and saw approximately 50 interested attendees from the industry. The workshop was chaired by CSDILA senior adviser Brian Marwick, who is also the industry adviser to the 3D cadastre team.

The session started with Chris Lester (DTPLI) and an update on SPEAR and the ePlan initiative in Victoria. This was followed by Geoff Lawford from Geometri, who provided a case study on drafting and submitting a plan through ePlan. Geoff has submitted 10 subdivision plans via ePlan and has received the first ePlan registration. Mohsen then presented an introduction about the 3D Land & Property project and its progress to date. PhD candidates Serene Ho and Davood Shojaei then presented updates on the different components of their research projects. Watch Davood's presentation on YouTube.

Serene provided insights gained from a case study in Melbourne on some of the potential barriers to 3D digital innovation in the land development and management processes while Davood showcased his prototype 3D visualisation platform. Also, after Serene's presentation, Malcolm McCoy's (AAM) presentation was about the utility of BIM in cadastral applications, and the role of laser scanning in developing BIM models. The presentations complimented each other covering different aspects of modern land management. The group received positive feedback from workshop participants and several invitations to engage further with stakeholders.

The highlight of the Summit was the VSEA awards. Prof. Rajabifard presented the 2013 Thornton-Smith medal to Geomatics graduate Chris Lester (far right, with Prof. Rajabifard) for outstanding contribution to the engineering profession in the field of Geomatics. Heartfelt congratulations to Chris.
Emerging technologies for 3D display in support of 3D Land & Property Management

Ian Bishop

In evaluating such emerging technologies, a key point to understand in any such review is that three-dimensional appearance can be created either by stereo presentation (separate images for each eye) or by motion parallax (different views as your eye location changes).

Stereo presentation is reasonable conventional with active and passive options based on use of special glasses, or more recently using autostereoscopic screens with no glasses required based on a system of lenticular lens. A conventional (2D) screen can support the motion parallax, for a single user, if head tracking is used, or if the light which emerges from each screen pixel is different in each direction. In either case, there is some disorientation of the view because only one depth cue is provided, as we are used to having both in nature. A single user can have both through a passive stereo screen combined with head tracking using markers on the stereo glasses.

A second key point is that the terms holography and holographic are being rapidly corrupted in this context with many innovative 'volumetric' display systems claiming to be holographic. None use laser-inference patterns for image storage and therefore are not truly holographic. The review is also considering technologies such as touchtables and touchwalls, 3D printers, and potential game-changing products such as Google Glass.